COVID-19 vaccine hesitancy in health care workers

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ABSTRACT

Introduction: Vaccination is one of the best ways to flatten the curve of COVID 19 infection and success of vaccination is achieved when vaccine hesitancy is minimal. The aim of this study is to analyze reasons for vaccine hesitancy among health care workers of a tertiary care hospital in Kathmandu Valley scheduled for COVID-19 vaccination.

Method: This is a descriptive cross sectional study conducted at KIST Medical College and Teaching Hospital from 25th February 2021 to 15th March 2021.This study included 156 health care workers of KIST Medical College who did not opt for the first dose of vaccination for COVID-19.

Result: The majority of health care workers hesitant for vaccination belonged to age group 18-29 years 67(42.9%)and females 117(75%) were more hesitant to vaccine than males. Helper and cleaning staffs 45(28.8%) were found to be more hesitant for vaccination followed by nursing staffs 29(18.6%). The reasons for vaccine rejection were due to safety issues 65(41.7%), followed by willingness to get vaccination at a later date 17(10.9%), misunderstanding the need of vaccination if already infected 14(8.9%), planning for pregnancy 14(8.9%), lactating mothers 14(8.9%) and pregnancy 11(7.1%).

Conclusion: This study emphasizes on the need of more advocacies in the safety of Covid19 vaccination. Its safety during pregnancy and lactation is to be addressed to increase the vaccination rate.

Keywords: COVID-19, health care workers, vaccine hesitancy

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INTRODUCTION

World Health Organisation (WHO), declared COVID-19 as pandemic on 12th March 2020, when confirmed cases reached 200,000 and mortality exceeded 8000 across 160 countries.[1, 2] The ongoing second wave of COVID pandemic has affected all aspects of life.[3] To overcome this pandemic, countries around the world are adopting social distancing, hand washing, wearing facemask, and even nationwide locked-down as a desperate measure. Vaccination strategy has emerged as an effective measure to control and alleviate the curve of COVID-19 infection.[3, 4]

Implementation of vaccination against COVID19 is undergoing for COVID control.[5] Not just the vaccine availability, but also its acceptance is important to guarantee success of vaccination program.[3]

COVISHIELD vaccination started in Nepal from 27th January 2021**.** Healthcare workers, being at high risk for exposure, were prioritized among the first group to receive vaccination. COVID-19 vaccine hesitancy among health care workers worldwide ranged from 4.3% to 72%. The safety, efficacy and concern of side effects were the common reasons for vaccine hesitancy among health care workers.[6] Vaccine hesitancy among health care workers can weaken the belief and impose strong impact in general population.[7] Our aim was to assess the reasons for vaccine hesitancy among health care workers of KIST-MCTH scheduled for COVID-19 vaccination.

METHOD

This is a descriptive cross sectional study done at KIST Medical College and Teaching Hospital from 25th February 2021 to 15th March 2021 after obtaining ethical clearance from Institutional Review Committee (IRC) of KIST Medical College (IRC No: 077/078/49). This study included all the health care workers of KIST Medical College scheduled for the first dose of COVID19 (COVISHIELD) vaccination who opted out of vaccination. Informed consent was taken from the unvaccinated Health care workers. Details regarding age, gender, designation (faculty, medical officers, interns, nursing staff, admin staff, pharmacy staff, helper and cleaning staff, security guard), prior COVID infection, co-morbidities (Diabetes, Hypertension, Tuberculosis, Cancer, Thyroid disorder, Bronchial asthma, Heart disease) and reason for vaccine rejection were filled in preset proforma sheet. Data were entered in Microsoft Excel and analysed using STATA 14.0. Categorical variables were analysed in the form of frequency and percentage.

RESULT

A total of 718 health care workers working in KIST medical College and Teaching Hospital were scheduled for first dose of COVISHIELD vaccine, out of which 161 did not opt for vaccination and 5 of them did not respond. A total of 156 health care workers were included in this study which is 21.73% of total scheduled ones.

The majority of non-vaccinated population belonged to 18 to 29 years 67(42.9%) and majority were females 117(75%). According to designation of the respondents, maximum number of non-vaccinated were helper and cleaning staff 45(28.8%) followed by nursing staff 29(18.6%) respectively (Table 1).

This study revealed that most of the respondents who were not vaccinated were concerned about the safety of the vaccine 65(41.7%). 17(10.9%) wanted to get vaccinated later and 14(8.9%) of them were planning for pregnancy and lactating mother respectively (Table 2).

Table 1. Characteristics of study population

Baseline Characteristics		n (%)	Baseline Characteristics		n (%)
Age group (years)	18 to 29	67 (42.9)	**Gender**	Male	39 (25)
	30 to 39	44 (28.2)		Female	117 (75)
	40 to 49	33 (21.1)	**Prior COVID infection**	Yes	38 (24.4)
	50 to 59	9 (5.8)		No	118 (75.6)
	≥ 60	3 (1.9)			
Designation	Faculty	17 (10.9)	**Co-morbidities**	None	139 (89.1)
	Medical Officers	5 (3.2)		Diabetes	1 (0.6)
	Interns	13 (8.3)		Hypertension	3 (1.9)
	Nursing Staff	29 (18.6)		Tuberculosis	1 (0.6)
	Admin Staff	11 (7.1)		Cancer	0 (0)
	Pharmacy Staff	6 (3.8)		Thyroid Disorder	5 (3.2)
	Helper and Cleaning Staff	45 (28.8)		DVT	1 (0.6)
	Security Guard	8 (5.1)		Bronchial Asthma	4 (2.6)
	Other Hospital Staff	22 (14.1)		Heart Disease	2 (1.3)

Table 2. Reasons for non-vaccination

Reasons	n (%)	Reasons	n (%)
Do not believe this vaccine is safe	65 (41.7)	History of severe allergy	8(5.1)
Willing to get vaccinated later	17 (10.9)	Do not believe this vaccine will prevent COVID 19 infection	7 (4.5)
Do not need it as I am already infected	14 (8.9)	Suffering from COVID at present	5(3.2)
Planning for pregnancy	14 (8.9)	Worried about rapidity of the development and approval of this vaccine	1(0.6)
Lactating mother	14 (8.9)	Fear of needles	0 (0)
Pregnancy	11(7.1)	Bleeding disorders	0(0)

DISCUSSION

Vaccination is one of the effective strategies to curb the curve of COVID 19 infection and to succeed in increasing the vaccination rate; there should be minimal hesitancy towards vaccination. In this study 21.73% of health care workers working in KIST medical college and teaching hospital did not take the first dose of COVID Vaccine. This finding is comparable with a study where out of 76,471 health care workers worldwide, 22.51% were COVID-19 vaccination hesitant.[6] The reason behind such a high rate of non-vaccination could be attributed to the lack of confidence on the safety of the newly developed vaccine as well as the disbelief on the efficacy of the vaccine. Limited information regarding vaccine and findings of clinical trial was not been published could have developed hesitancy in health care workers.[4]

In our study, the younger health care workers were found to more hesitant towards vaccination. This finding is similar to study done in Palestine where older age groups health care workers accepted to get vaccinated[1], reason for this could be the prevalence of fear of adverse outcome of COVID19 infection.[1,8]

Female health care workers were more hesitant than males; this finding is similar to many other studies.[4,9,10] The explanation for this hesitancy for vaccination among females was because of pregnancy, planning for pregnancy or lactating mothers. Adequate data on the safety of vaccination in pregnancy and lactating mothers were not available at that point of time. There is difference in decision making between genders as females are more concerned about side effect of the vaccine and will be unable to take care of families.[6]

In our study helper and cleaning staffs were more hesitant followed by nursing staffs. In one review article, they found direct connection between low education and lower income with a lower vaccine acceptance rate.[11] When we further inquired with them almost all had problem of economic constraints and were worried if anything happens to them, there is no one to look after their family.

In our study though 75.6% of hesitant health care workers were not infected with COVID-19 at the time of vaccination. Those who were infected were COVID-19 also opted out for vaccination believing that there is no need of vaccination as they have already been infected with COVID-19.

Around two fifth of health care workers (41.7%) were concerned about the safety of the vaccine, 10.9% were in confident in getting vaccinated and were willing to get vaccination at a later date considering the need to observe the adverse events. The reason for non-vaccination due to prior COVID19 infection was 8.9%. Because of the policy of excluding pregnant women and lactating mothers from vaccination due to safety concerns, 7.1% of pregnant women and 8.9% lactating mothers did not get vaccinated. Even 8.9% of those women planning for pregnancy refused vaccination due to safety concerns at the particular point of time. Similarly, in previous other studies side effects and safety of vaccine was the main concerns noted.[3,4,9,12,13] This finding contradicts with the finding done in US in which vaccine knowledge, demographic characteristics, risk factor for COVID 19 and politics had influenced vaccination.[14] This emphasizes on the need of more publication and circulation of data of clinical trials to shorten this pandemic. Reassuring campaigns about its side effects, safety and efficacy will definitely increase vaccine coverage.

This study was a single center study done among health care workers. The findings of this study may not be the same with the general population. Follow up of respondents in due course of time was not planned in this study and with growing knowledge on the necessity, safety and efficacy, the hesitancy towards COVID19 vaccination may have changed.

CONCLUSION

The hesitancy among health care workers will affect vaccination of the general population. Finding of the reasons will help to increase the rate of vaccination among the overall target population. This study strongly points towards gaining confidence in terms of safety of the vaccination. Its safety during pregnancy and lactation are to be addressed to increase the vaccination rate.

Conflict of Interest

None

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